

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
23 June 2005 (23.06.2005)

PCT

(10) International Publication Number
WO 2005/056776 A1

- (51) International Patent Classification⁷: C12N 1/21
- (21) International Application Number:
PCT/KR2004/003030
- (22) International Filing Date:
23 November 2004 (23.11.2004)
- (25) Filing Language: Korean
- (26) Publication Language: English
- (30) Priority Data:
10-2003-0091398
15 December 2003 (15.12.2003) KR
- (71) Applicant (for all designated States except US): CJ
CORP. [KR/KR]; 500, Namdaemunno 5 ga, Jung-gu,
Seoul 100-095 (KR).
- (72) Inventors; and
(75) Inventors/Applicants (for US only): PARK, Young-Hoon
[KR/KR]; 111-102 Mujigaedaerim Apt., Gumi-dong, Bun-
dang-gu, Seongnam-si, Gyeonggi-do 463-703 (KR). LIM,
Sang-Jo [KR/KR]; 103-1602 Dongseong Icha Apt.,
Jukjeon2-dong, Yongin-si, Gyeonggi-do 449-845 (KR).
KIM, Byoung-Hoon [KR/KR]; 205-1205 Samhwan Apt.,
2danji, Mansul-dong, Namdong-gu, Incheon 405-741
(KR). KIM, Seong-Jun [KR/KR]; 307-1001 Pungn-
imsinan Apt., 1235, Gwonseon-dong, Gwonseon-gu,
Suwon-si, Gyeonggi-do 441-390 (KR). LIM, Ho-Soo
[KR/KR]; Deokpyeong 1-2-ri, Majang-myeon, Icheon-si,
Gyeonggi-do 467-812 (KR).
- (74) Agent: LEE, Duck-Rog; YEIL Patent & Trademark In-
ternational, YEILPAT Bldg., 669-17 Yorksam-dong, Kang-
nam-ku, Seoul 135-915 (KR).
- (81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG,
MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH,
PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: E.COLI MUTANT CONTAINING MUTANT GENES RELATED WITH TRYPTOPHAN BIOSYNTHESIS AND PRO-
DUCTION METHOD OF TRYPTOPHAN BY USING THE SAME

caagaggttaagggttggaagcgagaaatattgcttctgtgtaaatataatgtacgaataatggat
tgaanaatttactttaaggatcgtctgctctctgctggagatcaactatgcaaacagac
ataaacaggatagcctatattgaanaagcgcgtgtaatacgtacatatgaaggaaggaagg
tttttaataagatcgggaanaattgaagggcgcgtttccatcgagcctgaanaaggaaggaaggaat
tgatgaatggatgaagcatttcaagatatctgctgggggcgaatcgtctgtgtggtgta
tgtggtcttctgttcaattcgtatcggaacgtctgtggaatattgctgctgaatttaagacc
ttgcccgaaggctagcgatagcctctctctgtgaatgcgcgtctattttgaanaacccgtac
caatgttggctgggaagggttaattaaagataccatattggatggctcttttgatgtagaagc
gggctgcagatcgcgcgttaattgtgattgagctgggtgaataatgggactgcactggcgcg
aagcgttagatcgaatacgaaggaataccatgggctgctgttttagtggtcgaattgggtg
tcgtacacgggaatcgcaaacatccgtgaattggcctccgggctttccatgcccgttgggttt
aanaacgggaacgaagggaatgtgggaacgaataatgaagatacgagcgaagcgcgaagcgc
accgttttgttggaattaaacgggaaggcaggttggttggatgaataatcagggaatcggga
cggcattgtgctcctgcgcgggtggttaagcgcgaataatagcctgggattgttggaattgt
gaaanaagatgggaacggcgggaatggcctctctgattggtgatttgagcagcgtgaatt
ccactaaagattatcgcctgag [tot] ggggtgggaatcgcgtggttgcctcaatcaagat
ggcaatcgtcgaattattggtctgagtgatgaaggaataatccacgggggaatcagttccg
agcaacggcagtggaatgaataaggtgtatccgtgaacgaatgcaatgagtgagtggaat
gaacgagccttctgctggaattatgaaggaatgaacggggaatcgaagcctgagtggt
taagaggttttatgtggttgatgaattgaaggaatgaaggaatgaatgagtgagtcgaatga
gcgctgtgaatttatagcgaagcgtctgggaatgggttggtgaagt

(57) Abstract: The present invention relates to a Tryptophan-producing *E.coli* mutant strain CJ285 (KCCM-10534) containing single or multi mutant genes related with Tryptophan biosynthesis and production method of Tryptophan using the same. More particularly, DNA base sequences and amino acid sequences *aroF*, *aroG*, *trpR*, and *tyrR* originated from tryptophan producing *E.coli* mutant strain CJ285 (KCCM-10534) and related with Tryptophan biosynthesis, are disclosed, and *E.coli* CJ285 containing at least one of the mutant genes is cultivated directly in a glucose-containing fermentation medium, whereby L-tryptophan can be accumulated in the culture medium.